

## **Closing the loop – Exploring circular business models for household appliances**

### **Background**

Product lifespans of household appliances are declining, leading to increased levels of material usage and environmental impact. The appliance industry follows a linear model of fast sales that is subject to high price competitiveness, which does not support companies in designing appliances that are made to last. Many times, it is both easier and more economical for users to simply replace their old appliances with new ones rather than having them repaired.

### **Project description**

In the move towards a more circular economy, new design solutions need to be supported by smarter business models. Your task in this project is to explore various possibilities for creating circular business models around appliances. For instance, appliances could be sold with a take-back guarantee. Another possibility is to let users to pay for their use rather than ownership of appliances, also known as product service systems (PSS). How could a new circular business model for appliances be designed in order to benefit both the producer and the user? How could the new business model be adapted to different kinds of users? To assess the profitability and feasibility of proposed business model(s), production cost, logistics cost, selling or renting price need to be studied. Also, the design and quality of appliances need to be considered to reduce maintenance costs, frequency of non-functionality, profitability of recycling etc.

### **Keywords**

circular business models, household appliances, profitability, use vs. ownership, user groups

### **Qualifications**

We are looking for students with an interest in Circular Economy and a good ability to work interdisciplinary and individually. You will be part of an exciting international research project about circular kitchens between Chalmers and a variety of industry partners. The project can be established as a collaboration between two master's students from the following programmes: Industrial Design Engineering, Product Development and Management and Economics of Innovation.

### **Contact**

Send an email with CV and motivational letter to [ulrike.rahe@chalmers.se](mailto:ulrike.rahe@chalmers.se)